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Dated: 1-18-06 Signature: Maura A. Gallagher  
(Maura A. Gallagher)

Docket No.: BBNT-P01-139  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Brig B. Elliott

Application No.: 09/943709

Confirmation No.: 2582

Filed: August 31, 2001

Art Unit: 2131

For: **SYSTEMS AND METHODS FOR PATH  
SET-UP IN A QUANTUM KEY  
DISTRIBUTION NETWORK**

Examiner: A. Sherkat

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT (SIDS)**

MS AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08.

This Supplemental Information Disclosure Statement is filed under 37 CFR 1.97(i) after the mailing date of a Notice of Allowance.

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application as required by 37 CFR 1.98(a)(2)(i), amended October 2004, as the U.S. Patent and Trademark Office has waived this requirement for all U.S. patent applications. Applicant submits herewith copies of foreign and non-patents in accordance with 37 CFR 1.98(a)(2).

The following co-owned pending patent applications may include subject matter similar to that disclosed in this application. One or more office actions may have issued in these cases.

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<u>Application No.</u>	<u>Title</u>	<u>Filed</u>	<u>Docket No.</u>
09/611783	Systems And Methods For Implementing A Quantum-Cryptographic Communications Network	July 7, 2000	BBNT-P01-009
09/944328	Quantum Cryptographic Key Distribution Networks With Untrusted Switches	August 31, 2001	BBNT-P01-134
10/197659	Key Distribution Center For Quantum Cryptographic Key Distribution Networks	July 17, 2002	BBNT-P01-164
10/218652	Methods And Systems For Distributing A Group Key In A Quantum Cryptographic Key Distribution Network	August 14, 2002	BBNT-P02-164
10/271103	Systems And Methods For Framing Quantum Cryptographic Links	October 15, 2002	BBNT-P01-231
10/271150	Quantum Cryptographic System With Photon Counting Detector	October 15, 2002	BBNT-P01-188
10/289192	Systems And Methods For Implementing A Unified Framework For Quantum Cryptographic Protocols	November 6, 2002	BBNT-P01-189
10/325325	Systems And Methods For Implementing Adaptive Quantum Cryptography	December 18, 2002	BBNT-P01-219
10/324040	Key Transport In Quantum Cryptographic Networks	December 20, 2002	BBNT-P01-210
10/324355	Systems And Methods For Managing Quantum Cryptographic Networks	December 20, 2002	BBNT-P01-218
10/384502	Autoconfiguration Via Quantum Cryptographic Link Framing	March 7, 2003	BBNT-P01-209
10/394974	Systems And Methods For Implementing A Sifting Protocol For Quantum Cryptography	March 21, 2003	BBNT-P02-189
10/402120	Quantum Cryptography Via Phase-Entangled Encoding	March 28, 2003	BBNT-P01-229

<u>Application No.</u>	<u>Title</u>	<u>Filed</u>	<u>Docket No.</u>
10/434248	Quantum Cipher Key Distribution Via Phase-Entangled Encoding Of Key Symbols	May 7, 2003	BBNT-P01-230
10/462292	Automatic Control Of Quantum Key Distribution	June 16, 2003	BBNT-P01-240
10/462400	Quantum Cryptography Based On Phase Entangled Photons	June 16, 2003	BBNT-P01-241
10/716078	Systems And Methods For Implementing Path Length Control For Quantum Cryptographic Systems	November 18, 2003	BBNT-P02-097
10/716747	Systems And Methods For Implementing Training Frames For Quantum Cryptographic Links	November 18, 2003	BBNT-P02-231
10/786314	Systems And Methods For Reserving Cryptographic Key Material	February 26, 2004	BBNT-P01-265
10/795313	Quantum Cryptography With Multiparty Randomness	March 9, 2004	BBNT-P01-268
10/795398	Simple Untrusted Network For Quantum Cryptography	March 9, 2004	BBNT-P01-259
10/797140	Systems And Methods For Implementing Adaptive Training For Quantum Cryptography	March 11, 2004	BBNT-P03-231
10/799177	Systems And Methods For Implementing Routing Protocols And Algorithms For Quantum Cryptographic Key Transport	March 12, 2004	BBNT-P01-015
10/800481	Systems And Methods For Implementing An Error Detection And Correction Protocol For Quantum Cryptography	March 15, 2004	BBNT-P02-021
10/803509	Systems And Methods For Quantum Cryptographic Key Transport	March 18, 2004	BBNT-P01-258

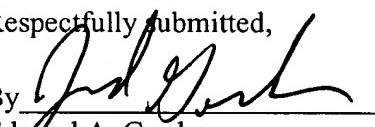
In accordance with 37 CFR 1.97(g), the filing of this Supplemental Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Supplemental Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Supplemental Information Disclosure Statement is in compliance with 37 CFR 1.98.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 18-1945, under Order No. BBNT-P01-139.

Dated: 1/18/2006

Respectfully submitted,

By 

Edward A. Gordon

Registration No.: 54,130

ROPES & GRAY LLP

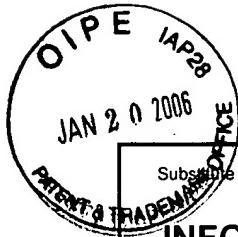
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PTO/SB/08a/b (08-03)  
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Substitute for form 1449A/B/PTO				<i>Complete If Known</i>	
				Application Number	09/943,709
				Filing Date	August 31, 2001
				First Named Inventor	Brig Barnum Elliott
				Art Unit	2131
				Examiner Name	A. Sherkat
Sheet	1	of	3	Attorney Docket Number	BBNT-P01-139

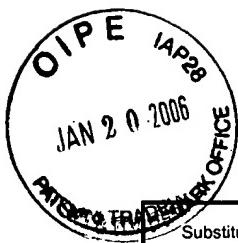
<b>U.S. PATENT DOCUMENTS</b>					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
AA*	US-4,445,116	04-24-1984	Grow		
AB*	US-4,649,233	03-10-1987	Bass et al.		
AC*	US-5,469,432	11-21-1995	Gat		
AD*	US-5,502,766	03-26-1996	Boebert et al.		
AE*	US-5,535,195	07-09-1996	Lee		
AF*	US-5,710,773	01/1998	Shiga, Tomohisa		
AG*	US-5,768,391	06-16-1998	Ichikawa		
AH*	US-5,805,801	09/1998	Holloway et al.		
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AJ*	US-6,233,075	05/2001	Chang et al.		
AK*	US-6,233,393	05/2001	Yanagihara et al.		
AL*	US-6,463,060	10/2002	Sato et al.		
AM*	US-6,563,796	05/2003	Saito, Hiroshi		
AN*	US-6,684,335	01/2004	Epstein et al.		
AO*	US-5,311,572	05/1994	Friedes et al.		
AP*	US-5,602,916	02/1997	Grube et al.		
AQ*	US-6,341,127	01/2002	Katsube et al.		
AR*	US-6,529,498	03/2003	Cheng		
AS*	US-6,538,990	11/2003	Mahalingaiah et al.		
AT*	US-6,560,707	05/2003	Curtis et al.		
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AW*	US-6,836,463	12/2004	Garcia-Luna Aceves et al.		

<b>FOREIGN PATENT DOCUMENTS</b>					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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<b>NON PATENT LITERATURE DOCUMENTS</b>					
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
	CA	"Quantum key distribution: Real-time compensation of interferometer phase drift," NTNU Department of Physical Electronics, pages 1-45.			
	CB	Bennett, C.H., et al., "Experimental Quantum Cryptography," Journal of Cryptography's special issue after Eurocrypt '90, 28 pages (September 1991).			
	CC	Bennett, C.H., et al., "Generalized Privacy Amplification," IBM Research, 24 pages (May 31, 1995).			

Examiner Signature	Date Considered
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Substitute for form 1449A/B/PTO				<b>Complete if Known</b>	
				Application Number	09/943,709
				Filing Date	August 31, 2001
				First Named Inventor	Brig Barnum Elliott
				Art Unit	2131
				Examiner Name	A. Sherkat
Sheet	2	of	3	Attorney Docket Number	BBNT-P01-139

CD	Bowers, J.E., "Optical Network and Component Trends," UCSB, NSF Workshop, 51 pages.
CE	Brassard, G., et al., "Cryptology Column – 25 Years of Quantum Cryptography," Pragocrypt, pp. 13-24 (July 1996).
CF	Brassard, G., et al., "Secret-Key Reconciliation by Public Discussion," Department IRO, Universite de Montreal, 14 pages (1994).
CG	Ekert, A.K., "Quantum Cryptography Based on Bell's Theorem," Physical Review Letters, 67(6):661-663 (1991).
CH	Elliott, B.B., et al., "Path-length control in a interferometric QKD link," Proc. of SPIE, Vol. #5101, 11 pages (April 21, 2003).
CI	Elliott, C., "Building the quantum network," New J. Phys., 4:46 (2002).
CJ	Franson, J.D., "Bell Inequality for Position and Time," Physical Review Letters, 62(19):2205-2208 (1989).
CK	Franson, J.D., "Violations of a New Inequality for Classical Fields," John Hopkins University, NTIS-NASA Publication; Goddard Space Flight Center; Workshop in Squeezed States and Uncertainty Relations, Feb. 1991, pp. 23-32.
CL	Gisin, N., et al., "Quantum cryptography and long distance Bell experiments: How to control decoherence," Geneva, Switzerland, pages 1-7 and 4 pages of drawings (January 15, 1999).
CM	Gisin, N., et al., "Quantum cryptography," Reviews of Modern Physics, 74:145-184 (2002).
CN	Honjo, T., et al., "Differential-phase-shift Quantum Key Distribution," NTT Technical Review, 2(12):26-33 (Dec. 2004).
CO	Jennewein, T., et al., "Quantum Cryptography with Entangled Photons," Physical Review Letters, 84(20):4729-4732 (2000).
CP	Maurer, U., et al., "Information-Theoretic Key Agreement: From Weak to Strong Secrecy for Free," Computer Science Department, Swiss Federal Institute of Technology, 20 pages (2000).
CQ	Maurer, U.M., "Secret Key Agreement by Public Discussion From Common Information," IEEE Transactions on Information Theory, 39:733-742 (1993).
CR	Mo, X., et al., "Intrinsic-Stabilization Uni-Directional Quantum Key Distribution Between Beijing and Tianjin," Key Lab of Quantum Information, Department of Electronic Engineering and Information Science, University of Science and Technology of China, Hefei, Anhui.
CS	Naik, D.S., et al., "Entangled State Quantum Cryptography: Eavesdropping on the Ekert Protocol," Physical Review Letters, 84(20):4733-4736 (2000).
CT	Nambu, Y., et al., "BB84 Quantum Key Distribution System based on Silica-Based Planar Lightwave Circuits," Fundamental and Environmental Research Laboratories and Fiber Optic Devices Division, pages 1-11.
CU	Paniccia, M., "Silicon Integrated Photonics," UCSB, 30 pages, February 2, 2005.
CV	Ribordy, G., et al., "Long-distance entanglement-based quantum key distribution," Physical Review A, Volume 63, 012309-1-012309-12 (2001).
CW	Scarani, V., et al., "Quantum Cryptography Protocols Robust Against Photon Number Splitting Attacks for Weak Lazer Pulse Implementations," Physical Review Letters, 92(5):057901-1 through 057901-4 (February 2004).
CX	Scarani, V., et al., "Quantum cryptography protocols robust against photon number splitting attacks," ERATO Conference on Quantum Information Science 2003, September 4-6, 2003, Nijimakaikan, Kyoto Japan; 2 pages.
CY	Schneier, B., "Applied Cryptography," Second Edition, Chapter 10, October 18, 1995, Wiley & Sons Publ., pp. 216-220.
CZ	Slutsky, B., et al., "Defense frontier analysis of quantum cryptographic systems," Applied Optics, 37(14):2869-2878 (1998).
CA1	Stucki, D., et al., "Quantum Key Distribution over 67 km with a plug&play system," New Journal of Physics, 41.1-41.8 (2002).
CB1	Tanzilli, S., et al., "PPLN waveguide for quantum communication," Eur. Phys. J.D., 18:155-160

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PTO/SB/08a/b (08-03)

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				Art Unit	2131
				Examiner Name	A. Sherkat
Sheet	3	of	3	Attorney Docket Number	BBNT-P01-139

	(2002).
CC1	Tittel, W., et al., "Long-distance Bell-type tests using energy-time entangled photons," Physical Review A, 59(6):4150-4163 (1999).
CD1	Tomita, A., et al., "Recent Progress in Quantum Key Transmission," NEC J. of Adv. Tech., 2(1):84-91 (Winter 2005).
CE1	Degermark, M., et al., "Small Forwarding Tables for Fast Routing Lookups," ACM, pages 3-14 (1997).
CF1	Estrin, D., et al., "Security Issues in Policy Routing," IEEE, pages 183-193 (1989).
CG1	Garcia-Luna-Aceves, J.J., et al., "Distributed, Scalable Routing Based on Vectors of Link States," IEEE Journal on Selected Areas in Communications, 13(8):1383-1395 (October 1995).
CH1	Garcia-Luna-Aceves, J.J., et al., "Scalable Link-State Internet Routing," Network Protocols (October 13-16, 1998).
CI1	Lakshman, T.V., et al., "High-Speed Policy-based Packet Forwarding Using Efficient Multi-dimensional Range Matching," Proceedings of the ACM SIGCOMM'98 conference on Applications, technologies, architectures and protocols for computer communication, pages 203-214 (1998).
CJ1	Lampson, B., et al., "IP Lookups Using Multiway and Multicolumn Search," IEEE/ACM Transactions on Networking, 7(3):324-334 (June 1999).
CK1	Ramanathan, R., et al., "Hierarchically-organized, multihop mobile wireless networks for quality-of-service support," Mobile Networks and Applications, 3:101-119 (1998).
CL1	Tsai, W.T., "An Adaptive Hierarchical Routing Protocol," IEEE Transactions on Computers, 38(8):1059-1075 (August 1989).
CM1	Waldvogel, M., et al., "Scalable High Speed IP Routing Lookups," ACM, pages 25-36 (1997).

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

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